Agila Senthil Kumar

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Skills and Expertise

Expertise: Software Development (Front-End, Backend and Full Stack), Software Developer (Infrastructure), Data Analyst.

Programming Languages: C, C++, Python, Java, JavaScript, Go, Rust, Typescript.

Frameworks: ReactJS, Node.js, HTML, CSS, Spring boot, Angular, Django, JSON, REST API, XML, Spark, Maven, Entity.

Tools: CI/CD, Git, Shell, Bash, Azure, AWS, GCP, Docker, Linux, Axure(UX Tool), Network Simulator3, Kubernetes, Jenkins.

Databases: NoSQL, MySQL, PostgreSQL, MongoDB.

Professional Experience

SAP Labs **July 2021 - Aug 2022**
Associate Software Developer *Bangalore, India*

- Enhanced data collection procedures with visualization tools like Seaborn and Matplotlib and using libraries like **Pandas** and **Numpy**.
- Upgraded **40%** better web performance using **AngularJS**, **React**, **Java**, and **HANA**, with a **30%** system response time improvement.
- Improved test result aggregation by **50%** with **Groovy** and **Java** scripts in Katalon Studio, reducing execution time by **25%.**
- Actively served as the **Scrum Master**, facilitating **agile software development** that led to a **40%** increase in productivity.

Arizona State University **June 2023 - Dec 2023**
Software Research Intern - PERSUE: PrivatE, Reliable and SecUrE Computing Lab *Tempe, AZ, US*

- Examined **3300** reviews through manual annotation, with **2700** from app users and **600** from Chrome extension users.
- Uncovered potential rogue behavior by searching **66.7%** reviews for keywords like "spy," "stalk," "stealth," etc using **NLP**.
- Analyzed user feedback, addressed privacy concerns, deployed enhanced security features, and accomplished a **25%** reduction in related issues, boosting user satisfaction and app usage.

BITS Pilani - Software Defined Networking Lab, CS Department **May 2020 - July 2020**
Software Engineer Intern *Rajasthan, India*

- Developed and executed an innovative algorithm using **Game Theory** to optimize scheduling and allocation of Physical Resource Blocks in machine to machine communications with the data rate as per Nash Equilibrium.
- Adopted Coalition game-theoretic technique to analyze the behaviour of the machines and self-value of coalition is induced to calculate payoff for the machines by using bankruptcy game with **ns3** used for implementation.

Homefills Pvt.Ltd. **Dec 2019 - Feb 2020**
Software Development Intern *Odisha, India*

- Collaborated in an agile team to deploy a highly interactive commercial website, achieving a **70%** boost in functionality.
- Utilized **HTML, CSS, Javascript, NodeJS and MongoDB (Express Framework)** for the full stack development of website.

Education

Actively seeking Software Co-op positions for Spring 2024 and full time roles starting May 2024

Master of Science in Computer Engineering (Computer Systems) **May 2024**
Arizona State University | Tempe, AZ *CGPA : 4.0/4.0*

Bachelor of Technology in Computer Engineering **Jun 2021**
National Institute of Technology | Trichy, India *CGPA : 3.33/4.0*

Academic Projects

Optimisation of photonic crystal encoder and decoder | *Under the guidance of Prof Dr.Thavasi* **Bachelor's Thesis**

- Achieved an accuracy of 97.06 and minimised the loss to 0.0056 in predicting the outputs of different integrated nano photonic coupled ring resonators which are considered as a regression problem under **Supervised Learning**.
- Introduced **OFDM** and a multi layered perceptron regression algorithm to generate an inferred function depicting output.

Evidence Digitalization | *Under the theme "Crime Free Bharath"* **Smart India Hackathon' 2020**

- Developed a law enforcement portal, enabling digitalization (Text extraction using OCR) of evidence in diverse forms.
- Implemented blockchain to store hash values, ensuring tamper identification with a success rate of **80%**.
- Dynamically generated certificates for the admissibility of evidence (written or oral) during prosecution, contributing to a **20%** efficiency increase and leveraged **NLP** to extract critical information enhancing overall system performance.

NITT PayApp | *Android Application* **TransfiNITTe' 2019**

- Devised an integrated NIT Trichy centric payment application using **Nodejs** and **Android** for vendors inside campus and students to enable easy payments through smart location based services which also displays the live location of auto rickshaws.

Achievements

Grace Hopper Celebration' 2023 - Awardee of GHC'23 Scholarship and attended in person.
Smart India Hackathon' 2020, Software - Winners out of 0.5 million participants all over India, conferred by Prime Minister, India.
TransfiNITTe' 2019, Software - Intra NIT Trichy Hackathon - Second place out of 250+ teams.
NIT Conclave'2018, Overall and Technical Module - Winners out of all the 31 NITs of the country.